

**Physics 1130 Syllabus**  
**Section 001**  
**Fall 2009**

Lecture: 220 Denny, MW 12<sup>30</sup> – 1<sup>45</sup> pm

Final Exam: Wednesday December 16, 2009; 11<sup>30</sup> am – 2<sup>30</sup> pm

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**Course Goal and Objectives**

General Education Goal

This course has been approved to satisfy General Education Goal IV. Understanding Science and Technology (S). Graduates should: Be conversant with and have had experience in the aims, methods, and principles of scientific and technological endeavors. Understand the nature and limitations of the world view given us by sciences. Understand the effects of technology in shaping the physical and human environments.

Course Objective

To have a basic understanding of the universe – the totality of all space, time, matter, and energy.

To check your current grades and keep track of other course information...  
use **Blackboard Vista**

Text:

***Astronomy: A Beginner's Guide to the Universe,***  
***6<sup>th</sup> Edition***

Chaisson and McMillan

Other requirements:

1. You will need to purchase or borrow an InterWrite PRS-RF Personal Response System (your clicker), and register it for this class.
2. You will need a calculator that can calculate *cube roots* and display *scientific notation*. ( You do not need a *graphing* calculator or a *memory* calculator. )
3. Do not come to class late. It disturbs your fellow students. If you are going to be more than 5 minutes late, skip the class and get notes from a classmate. You are still responsible for the information.

## Grading

Your grade will be determined by the degree to which you have met the course objective by the end of the semester. You will be tested on those aspects of the objective that are discussed in the lecture. Some of the material covered in lecture may not be in the text, so attendance is very important.

### 1. Exams (60%)

There will be three scheduled In-class exams. Each exam will account for 20% of your grade. *There are no make-up exams.*

### 2. Final Exam (20%)

There will be a comprehensive Final Exam on **Wednesday December 16, 2009 at 11:30 am** that will account for 20% of your grade. Your Final Exam Score will replace your lowest In-class Exam score (if the Final Score is higher).

### 3. Daily reading quizzes and in-class clicker questions (15%)

Virtually every class period will have graded clicker questions. Your score on these will be the average of all of your responses during the semester.

### 4. 1-on-1 Meeting (5%)

There will be an opportunity for you to meet one-on-one with the instructor in his office in Grigg Hall. The meeting is to discuss your individual goals and how this physics course helps you to achieve those goals. Near Exam 1, you will be given the opportunity to sign up (during class) for a time to meet with the instructor. Attendance at this meeting is a required and it will

account for 5% of your grade. If you fail to show up at the assigned time, you will not receive the 5% toward your grade. *There are no make-up 1-on-1 meetings.* If you have an excused absence from the meeting, by informing the instructor **before the meeting**, you may re-schedule.

The final grade is based on 100 points: A=90-100; B=80-89+; C=70-79+; D=60-69+; F=<60. There is **no additional “extra credit”** available for this course.

*“The harder the conflict, the more glorious the triumph.”*  
— Thomas Paine, December 1776

### **Other Course Policies**

You are encouraged to work with other students, consult other texts in the library or on the internet, and seek additional help from the instructor and teaching assistants. However, you may not work with other students or instructors on any portion of the exams or quizzes.

Students have the responsibility to know and observe the requirements of **The UNC Charlotte Code of Student Academic Integrity** and **The UNC Charlotte Code of Student Responsibility** which can be found at

<http://www.legal.uncc.edu/policies/ps-104.html>

<http://www.legal.uncc.edu/policies/ps-105.html>

The testing in this course is limited by time constraints (typically one course period for tests and an extended period for the final exam). If you have difficulty with timed testing or other course policies, you are encouraged to talk with the instructor or in some cases inquire at the Office of Disability Services (687-4355) for assistance.

Tentative schedule

<b>Date</b>	<b>Topic</b>	<b>Reading Assignment (pages)</b>
8/24	<b>Scales</b>	
8/26	<b>Time zones, constellations</b>	<b>1-7</b>
8/31	<b>Seasons, Moon phases, eclipses</b>	<b>7-18</b>
9/2	<b>History: Ptolemy to Kepler</b>	<b>25-34</b>
9/9	<b>History: Kepler to Newton</b>	<b>35-39</b>
9/14	<b>Sci.meth. Tides, Newton Einstein</b>	<b>18-22, 44-50, Box 2-1, 137-140</b>
9/16	<b>Light &amp; telescopes</b>	<b>69-95</b>
9/21	<b>Review</b>	
9/23	<b><i>EXAM 1</i></b>	
9/28	<b>Solar System</b>	<b>101-105, 118-127</b>
9/30	<b>Planet formation</b>	<b>63-64, 127-131</b>
10/5	<b>Earth &amp; Moon, Mercury</b>	<b>135-160</b>
10/7	<b>Venus &amp; Mars</b>	<b>161-173</b>
10/14	<b>Mars, Asteroids, Jovian planets</b>	<b>173-190</b>
10/19	<b>Outer planets &amp; comets</b>	<b>105-118, 193-238</b>
10/21	<b><i>EXAM 2</i></b>	
10/26	<b>Light &amp; spectra</b>	<b>51-65</b>
10/28	<b>The Sun</b>	<b>243-263</b>
11/2	<b>Stars – HR diagram</b>	<b>267-288</b>
11/4	<b>Stellar models</b>	<b>292-316</b>
11/9	<b>Low-mass evolution</b>	<b>319-329</b>
11/11	<b>High-mass evolution</b>	<b>330-371</b>
11/16	<b><i>EXAM 3</i></b>	
11/18	<b>Milky Way, galaxy types</b>	<b>377-409</b>
11/23	<b>Galaxies &amp; dark matter, lensing</b>	<b>410-434</b>
11/30	<b>Galaxy evolution</b>	<b>374-375, 435-453</b>
12/2	<b>Cosmology &amp; general relativity</b>	<b>457-482</b>
12/7	<b>Life</b>	<b>485-497</b>
12/9	<b>Life on other planets, UFOs, REVIEW</b>	<b>498-501</b>
12/16	<b><i>Final Exam 11:30 AM</i></b>	